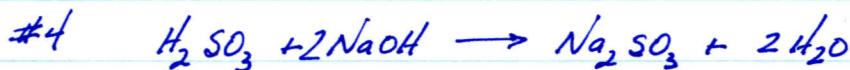


p. 322



C	?	0.105 mol/L
V	0.025 L	0.01072 L
n	0.0005628	0.001126

$$C = n/V$$

$$= 0.0225 \text{ mol/L}$$

$$n = CV$$

$$= (0.105)(0.01072)$$

$$= 0.001126$$



C	0.20 mol/L	?
V	0.05750 L	0.025 L
n	0.0115	0.0115

$$n = CV$$

$$= 0.2(0.05750)$$

$$= 0.0115$$

$$C_{\text{HBr}} = n/V$$

$$= 0.46 \text{ mol/L}$$



C	0.765 mol/L	?
V	0.08619 L	0.030 L
n	0.0659	0.0659

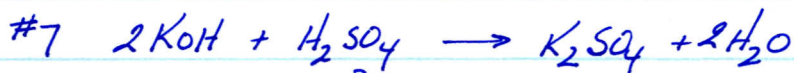
$$n = CV$$

$$= (0.765)(0.08619)$$

$$= 0.0659$$

$$C_{\text{HCl}} = n/V$$

$$= 2.20 \text{ mol/L}$$



C	0.050 mol/L	?
V	0.00944 L	0.010 L
n	0.000472	0.000236

$$n = CV$$

$$= 0.050(0.00944)$$

$$= 0.000472$$

$$C = n/V$$

$$= 0.0236 \text{ mol/L}$$



C	0.0974 mol/L	
V	0.15001 L	0.010 L
n	0.0146	0.0292

$$n = CV$$

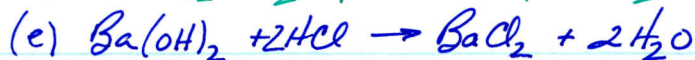
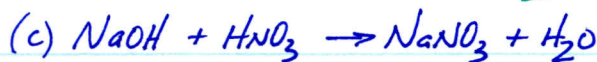
$$= 0.0146$$

$$C = n/V$$

$$= 2.92 \text{ mol/L}$$

— k — k — k —

p. 323

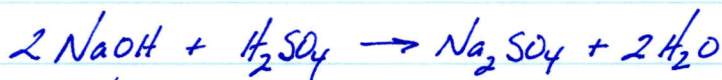


#3 Several trials are performed to reduce experimental error.

#4	TRIAL 1	TRIAL 2	TRIAL 3	TRIAL 4
Final Volume NaOH (mL)	12.10	23.65	35.10	46.55
Initial Volume NaOH (mL)	0.35	12.10	23.65	35.10
Volume Used (mL)	11.75	11.55	11.45	11.45

$$V_{\text{avg}} = 11.48 \text{ mL}$$

not used in V_{avg}
as it is not close to
the other 3 values



C	0.484 mol/L	?
V	0.01148 L	0.010 L
n	0.00556	0.00278

$$\begin{aligned} n &= CV \\ &= (0.484)(0.01148) \\ &= 0.00556 \end{aligned}$$

$$\begin{aligned} C &= n/V \\ &= 0.00278 / 0.01 \\ &= 0.278 \text{ mol/L} \end{aligned}$$

#5 The volumes for trials 1, 3 + 4 would be used. Even though they are not as close in agreement as those in question #4, the endpoint colour was the same.

